The threat of an influenza pandemic is greater today than it has been in the last three decades. Avian influenza has spread from Asia to Europe. Currently, human cases of avian influenza have been reported from Vietnam, China, Cambodia, Thailand, Indonesia, and, most recently, Turkey. Although there has been little if any human-to-human transmission, the possibility of such a mutation will exist as long as the virus continues to spread. Although no avian influenza has been reported in the United States as of January 19, 2006, Sacramento County is currently working on several aspects of pandemic flu planning.

Sacramento County Public Health has developed a pandemic response plan, which will be revised to coordinate with the recently released federal and state plans. The plan addresses several tasks, many of which must take place concurrently:

1. Surveillance
2. Laboratory Diagnostics
3. Healthcare Planning
4. Infection Control
5. Clinical Guidelines
6. Vaccine Distribution and Use
7. Antiviral Drug Distribution and Use
8. Community Disease Control and Prevention
9. Management of Travel-Related Risk of Disease Transmission
10. Public Health Communications
11. Psychosocial Services

The Division of Public Health will take the lead for planning in Sacramento. We hope to begin the dialogue with all levels of our community to formulate a plan that mitigates the inevitable economic and social upheaval such a pandemic would cause.

Currently there is ongoing surveillance in all adult and pediatric intensive-care units in the county. Public Health staff investigate all cases of severe respiratory illness of unknown cause found in the intensive care units. Physicians are also encouraged to report any cases of severe respiratory disease seen in recent travelers to the affected areas of the world. In addition, the Sacramento County Public Health Laboratory offers free testing of samples from patients with severe respiratory disease.

The testing panel includes the following:
Rapid tissue culture ID:
- Influenza A and B, Adenovirus, RSV, Parainfluenza 1, 2, 3
- Influenza A and B, Flu A-H1, H3, H5 typing and SARS virus

Nasal aspirates or nasal washes are preferred. Nasopharyngeal swabs and throat swabs may not contain as many viral particles but can be tested. For further information on testing please contact the Sacramento County Public Health Laboratory at (916) 875-9231.

At this time Sacramento County Public Health does not have a local stockpile of influenza antiviral medication. The decision to stockpile or not is a policy decision that needs to be made with the help of an advisory board.

The Northern California Partnership for Influenza Prevention (NCPIP) has also taken an interest in this planning effort. NCPIP was established three years ago to support influenza prevention efforts throughout the community. It consists of private healthcare providers, community based organizations, industry partners and public health representatives.

At a recent meeting where pandemic influenza was discussed, the NCPIP audience recommended that Public Health concentrate on community education about the threat of Pandemic flu and its consequences, helping all to prepare for this eventuality. School children were suggested as a good audience for lessons on handwashing and respiratory etiquette. The dialogue will be ongoing.

NCPIP has developed a work plan to increase influenza immunization in the community. NCPIP meets the second Wednesday evening of every month at Kaiser Pointe West, from 6:00 p.m. to 8:00 p.m. All interested parties are welcome to attend. Since dinner is served at the meetings, if you plan to attend, please contact Sally Shaw at 875-6860 to let her know that you will be attending.
ACIP Votes to Recommend Use of Combined Tetanus, Diphtheria and Pertussis (Tdap) Vaccine for Adults and for Adolescents

Pertussis is a highly contagious respiratory tract infection. Although most children are protected against pertussis by vaccination during childhood, immunity wanes over time and leaves adults and adolescents unprotected. In 2004, U.S. adults 19–64 years of age accounted for 7,008 of 25,827 (27%) reported pertussis cases. That same year U.S. adolescents 11–18 years of age made up 34% (8,897) of the total 25,827 reported cases; reported cases underestimate the true burden of pertussis in adolescents and adults. The clinical presentation of pertussis in adults and adolescents ranges from mild cough illness to classic pertussis (i.e., prolonged cough characterized by paroxysms, post-tussive emesis, and inspiratory whoop). Complications include rib fractures resulting from severe cough and pneumonia requiring hospitalization. Adults and adolescents with pertussis can transmit the infection to other people, including infants. Infants are at highest risk of pertussis-related complications and death compared with older age groups. Pertussis outbreaks in schools with adolescents are disruptive and lead to significant public health control efforts.

A Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed (Tdap) product, ADACEL™ (sanofi pasteur), was licensed by the FDA on June 10, 2005 as a single dose booster vaccine for persons 11-64 years of age to provide protection against tetanus, diphtheria, and pertussis (www.fda.gov/cber/label/tdapave061005LB.pdf). Another Tdap vaccine, BOOSTRIX® (GlaxoSmithKline Biologicals), was licensed May 3, 2005 for persons 10-18 years of age.

On June 30, 2005, the Advisory Committee on Immunization Practices, voted to recommend routine use of Tdap in adolescents, the following meeting on October 26, 2005, the ACIP recommended routine use of a single dose of Tdap for adults 19 - 64 years of age to replace the next booster dose of tetanus and diphtheria toxoids vaccine (Td). The ACIP also recommended Tdap for adults who have close contact with infants <12 months of age. (www.cdc.gov/od/oh/media/pressrel/r051109.htm). Provisional recommendations for use of Tdap (ADACEL™ and BOOSTRIX®) among adolescents 11-18 years of age are available at http://www.cdc.gov/nip/vaccine/tdap/tdap_child_recs.pdf.

New Confidential Morbidity Report (CMR) form

An updated version of the Confidential Morbidity Report (CMR) form for use by healthcare providers in Sacramento County was released in September 2005. Both West Nile Virus infection and Severe Acute Respiratory Syndrome (SARS) have been added to the State of California, Health and Human Services Agency list of reportable conditions. Previously, both WNV and SARS were reportable locally to Sacramento County Public Health.

Additionally, Alzheimer’s disease, which was previously listed separately under reportable non-communicable diseases and conditions, is now included as one of the disorders characterized by lapses of consciousness. Please note that reporting is required for any disease or condition that can result in lapses of consciousness, such as diabetes, heart disease, seizures, drug abuse, etc.

A copy of the new CMR form can be found on the Sacramento County Public Health website at: http://www.scph.com. If you want to report a CMR via the web, use our reporting website at www.saccmr.net. Instructions for creating a user id, logging on and site use are located at www.scph.com.

OraQuick Advance Oral Fluid Rapid HIV Antibody Test: Survey Results & Recommendations from the California Department of Health Services, Office of AIDS

- Despite problems reported in agencies in San Francisco and Los Angeles, the OraQuick Advance Rapid HIV oral fluid test is functioning within the expected range across the state: overall specificity is 99.7%, and state-wide specificity (excluding San Francisco and Los Angeles) is 99.9%.
- Agencies in San Francisco and Los Angeles have reported higher-than-expected rates of false positives. The tests’ manufacturer, OraSure Technologies Inc., the Centers for Disease Control and Prevention (CDC), and the Food and Drug Administration (FDA), continue to investigate possible causes.
- No changes to testing procedures are recommended at this time by CDC, FDA, or our office. However, all agencies emphasize the importance of adhering to the existing requirement to conduct standard confirmatory testing on any preliminary positive rapid HIV test result.
- Although no changes to procedures are recommended, two options exist for easing concerns if they exist in your locale:
  - Offer both fingerstick and oral fluid rapid testing so that clients with concerns may choose fingerstick or offer fingerstick testing exclusively; or,
  - Conduct a “back-up” fingerstick rapid HIV test in addition to standard confirmatory testing for clients receiving a preliminary positive oral rapid oral fluid HIV test result. (See full text below for details about this option.)

It is important to note that the Office of AIDS continues to have full confidence in the oral rapid HIV test currently being used in California. OA will continue to track oral fluid testing performance. Please contact the local Field Service office at 227-0445 if concerns regarding test performance arise in your practice.
Appropriate Laboratory Testing for the Diagnosis of Pertussis

Between January and December 2005, 134 cases of pertussis were reported in Sacramento County (9.2 cases per 100,000 population). During the same period, 2,442 cases of pertussis were reported in California (6.63 cases per 100,000 population). Local health departments respond to all reports of suspected or confirmed cases of pertussis to prevent transmission to young infants and other persons at increased risk of severe or fatal pertussis. The prompt identification and reporting of cases is important to facilitate the early antimicrobial prophylaxis of contacts and of households with an infant. In addition, the new ACIP recommendations for immunizing adolescents and adults with Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed (Tdap) may also be used as a strategy to reduce the rising number of cases of pertussis in our community.

Unfortunately, making a specific diagnosis of pertussis can be difficult. The standard and preferred laboratory test for diagnosis of pertussis is isolation of *B. pertussis* by bacterial culture. Although bacterial culture is specific for the diagnosis, fastidious growth requirements make *B. pertussis* difficult to isolate, especially in later stages of the illness. Under optimal conditions, 80% of suspected cases in outbreak investigations can be confirmed by culture; in most clinical situations isolation rates are much lower.

Polymerase chain reaction (PCR) testing of nasopharyngeal swabs can be a rapid, sensitive, and specific method for diagnosing pertussis. However, there is no FDA-licensed test kit that is available. False positive results may be obtained because of contamination in the laboratory or during specimen collection. Direct comparison with culture is necessary for validation. Even if a laboratory has validated its PCR method, the result should be considered presumptive and isolation of *B. pertussis* by culture should be attempted to assure that the disease is truly pertussis.

Although commercially available direct fluorescence antibody (DFA) tests have been widely used to screen patients for *B. pertussis* infection, these tests lack sensitivity and specificity for *B. pertussis*. Cross reactions with normal nasopharyngeal flora account for false-positive results in up to 85% of tests and lead to substantial unnecessary public health interventions. False-negative DFA test results may delay treatment in infants (until *B. pertussis* is isolated by culture) and thereby increase morbidity. Given that DFA testing of nasopharyngeal secretions has low sensitivity and variable specificity compared with culture, DFA should not be relied on as a criterion for laboratory confirmation.

Serologic testing could be very useful in adults and adolescents, who often present too late for either culture or PCR to be positive. However, there are limitations to currently available assays.

First, there is no FDA licensed serology test for pertussis. So the extensive type of validation that is done by a commercial manufacturer for licensure has not been done for these assays.

The current serologic tests were developed for use in vaccine trials and thus measure antibody response to vaccine antigens. That means that these tests only include antigens that are present in the vaccine. There are other pertussis antigens that are not contained in the vaccine, but none of these antigens are included in the currently available tests.

Therefore a positive serology simply means that the person has been exposed to pertussis (by infection [recent or past] or by vaccination). Until licensure of the Tdap vaccine, recent vaccination was not an issue in adolescents and adults. But now, an adolescent or adult could have received a recent vaccination. Antibody to PT has been shown to persist at detectable levels for many years (up to 10), so a level that is simply above a negative cut-off could be due to remote (years ago) infection.

The currently available commercial assays are qualitative, i.e. they are either negative or positive (showing a level above some background cut-off point). The commercial reference laboratories have not established a cut-off point to differentiate recent from remote infection. They simply show that the person does or does not have detectable antibody to pertussis. Distinguishing vaccine response from infection in an adolescent or adult has not been an issue until the recent licensure of the Tdap vaccine. Now that will have to be considered in the algorithm.

In summary, an appropriate culture is the gold standard for the laboratory confirmation of acute pertussis. The Sacramento County Public Health staff rely on physician clinical judgment if the culture is not available. In the future there may be other tools to help with the laboratory confirmation of pertussis, but currently none of those that are available have been standardized.
### Reported Cases of Selected Notifiable Diseases by Date of Report, Sacramento County 2001-2005*

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<td>38</td>
<td>33</td>
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*Data is Provisional
### Report IMMEDIATELY by Phone:

- Anthrax
- Botulism
- Brucellosis
- Cholera
- Dengue
- Diphtheria
- E.coli O157 infection
- Foodborne illness (>2 cases)
- Hantavirus infections
- Hemolytic Uremic Syndrome
- Meningococcal infections
- **Plague (any form)**
- Rabies (any form)
- Severe Acute Respiratory Syndrome (SARS)
- Seafood poisoning:
  - Domoic Acid
  - Ciguatera
  - Scrombroid
  - Paralytic Shellfish
- Smallpox
- Tularemia
- Unusual disease
- Varicella (deaths only)
- Viral Hemorrhagic Fevers
- Yellow Fever
- Outbreaks:
  - Neonatal diarrhea
  - Any disease

### REPORT Within ONE WORKING DAY:

- Amebiasis
- Anisakiasis
- Babesiosis
- Campylobacteriosis
- Colorado Tick Fever
- Conjunctivitis (acute infectious) of the newborn.
- Cryptosporidiosis
- Encephalitis (infectious)
- Ehrlichiosis
- *Haemophilus influenzae* (invasive)
- Hepatitis A
- Listeriosis
- Lymphocytic choriomeningitis
- Malaria
- Measles
- Meningitis
- Neonatal conjunctivitis
- Pertussis
- Psittacosis
- Poliomyelitis
- Q Fever
- Relapsing Fever
- RMSF
- Salmonellosis
- Shigellosis
- Streptococcal Infections
- Syphilis
- Swimmer’s itch
- Trichinosis
- Typhoid fever (cases & carrier)
- Typhus Fever
- Tuberculosis
- *Vibrio* infections
- West Nile Virus
- Yersiniosis

### ANY FOOD- OR WATER-BORNE ILLNESS

### REPORT WITHIN ONE WEEK:

- AIDS
- Aspergillosis
- Chancroid
- Chlamydial infections
- Coccidioidomycosis
- Cysticercosis
- Echinococcosis
- Giardiasis
- Gonococcal infections
- Hepatitis B, C, D
- Hepatitis, other viral
- HIV
- Kawasaki’s syndrome
- Legionellosis
- Leprosy
- Leptospirosis
- Lyme Disease
- Mumps
- NGU
- PID
- Reye’s syndrome
- Rheumatic fever, acute
- Rocky Mountain Spotted Fever
- Rubella
- Congenital Rubella
- Syndrome
- Tetanus
- Toxic shock syndrome
- Toxoplasmosis

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**Monday – Friday 8 AM to 5 PM, call:**
Sacramento County Health and Human Services, Communicable Disease Control
7001-A East Parkway, Suite 600, Sacramento, CA 95823 (916) 875-5881 FAX (916)-875-4069
WWW.SCPH.COM
Epi/Communicable Disease Report

Spring 2006 – In this issue

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- OraQuick Advance Oral Fluid Rapid HIV Antibody Test Results & Recommendations
- ACIP Recommends the use of Tdap Vaccine for Adults and Adolescents
- Appropriate Lab Testing for the Diagnosis of Pertussis
- Updates on Reportable Diseases

To report a Communicable Disease

Report via the Web at www.saccmr.net
Or phone, fax, or mail a CMR to
Sacramento County Dept of Health and Human Services
Epidemiology and Disease Control
7001- A East Parkway Ste 600 Voice (916) 875-5881
Sacramento, CA 95823 Fax (916) 875-4069